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1/5/1 (Item 1 from file: 351)  
DIALOG(R) File 351:DERWENT WPI  
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009143333 WPI Acc No: 92-270771/33  
XRPX Acc No: N92-206981

Automatic decoupling system for four-wheel drive vehicle - uses electro-servo-valves controlled by front directing wheels to disconnect flow to rear driving wheels

Patent Assignee: (MICR-) MICROVOIRIE SARL

Author (Inventor): BUDET H

Number of Patents: 001

Number of Countries: 001

Patent Family:

CC Number	Kind	Date	Week	
FR 2670441	A1	920619	9233	(Basic)

Priority Data (CC No Date): FR 9015600 (901213)

Abstract (Basic): FR 2670441 A

The system has two electro servo valves (5, 6). These control the hydraulic oil to a primary circuit (13) which feeds the directing wheels at the front of the vehicle and a secondary circuit which feeds the rear wheels.

The electro servo valves are controlled by a connection to the directing wheels and at a predetermined steering angle disconnect hydraulic oil flow to the rear wheels.

USE/ADVANTAGE - As a decoupling system for light vehicles such as sweeping machines with four wheel hydraulic drive. Gives improved manoeuvrability on difficult terrain through automatic decoupling of 4 wheel drive.

Dwg.1/3

Derwent Class: Q13; Q57; Q64;

Int Pat Class: B60K-017/34; F15B-011/16; F16H-039/00

?s pn=@04924970

?s pn=de 1555065

S3 1 PN=DE 1555065

?type 3/5/1

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DIALOG(R) File 350:Derwent World Pat.

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001221883 WPI Acc No: 75-A5656W/03

Hydrostatic drive for vehicle - with differential drive for cornering  
by pivotting axial piston motors on steering

Patent Assignee: (CLAE ) CLARK EQUIPMENT CO

Number of Patents: 001

Patent Family:

CC Number	Kind	Date	Week
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DE 1555065 B 750109 7503 (Basic)

Priority Data (CC No Date): US 517254 (651229)

Abstract (Basic): The hydrostatic servo motors are connected in series to  
the main pump and are pivotted on the steering linkage to alter their  
relative setting to the wheels during cornering. The motors are axial  
piston types with their outputs determined by the angle of the drive  
shafts. The system provides differential torque distribution for  
cornering without requiring any control valves. A parallelogram  
linkage is provided on each track rod end.

Derwent Class: Q13;

Int Pat Class: B60K-017/10

S2 1 PN=EP 324970  
?type 2/5/1

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DIALOG(R) File 351:DERWENT WPI  
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007949108 WPI Acc No: 89-214220/30

XRPX Acc No: N89-163265 \*Image available\*

Self-propelled lawn mower with three cutters - which are fitted ahead of mower wheels, with one offset to one side of central axis

Patent Assignee: (DEEC ) DEERE & CO

Author (Inventor): PHILLIPS D L; SMITH L N

Number of Patents: 006

Patent Family:

CC	Number	Kind	Date	Week	
EP	324970	A	890726	8930	(Basic)
AU	8827662	A	890720	8936	
US	4866917	A	890919	8947	
CA	1278923	C	910115	9109	
EP	324970	B	920226	9209	
DE	3868616	G	920402	9215	

Priority Data (CC No Date): US 145344 (880119)

Applications (CC, No, Date): EP 88121559 (881223)

Language: German

EP and/or WO Cited Patents: DE 2652743; EP 189619; US 3910016; WO 8706792;  
DE 3344049; GB 1074691; US 3090184; US 2178467; GB 761572; US 3757500

Designated States

(Regional): DE; FR; GB

Abstract (Basic): EP 324970

The lawn mower has a driving seat (24) ahead of an engine compartment (20), two wheels (14,16) at the front and a single wheel (18) at the rear. It has a cutter unit (32,34) ahead of each front wheel and a third unit (36) ahead of the rear wheel. The cutter units form a symmetrical arrangement, offset to one side of the central axis of symmetry (a) of the machine.

The central axis (c) of the rear unit is offset for a distance (d) equal to half the width of a front wheel. The combined width of cut is wider than the width of track covered by all three wheels. The central axes (r,d) of the two front units are in line with one side of the front wheels.

USE/ADVANTAGE - For parks, golf courses etc., without excessive lawn compacting. @ (7pp Dwg.No.2/2) @

Abstract (US): 8947 US 4866917

Two front wheels and a single wheel are mounted symmetrically relative to a longitudinal centre line of the mower. Three mower units are mounted to the mower frame to cut grass ahead of each of the wheels. These mower units are offset so as to be located non-symmetrically relative to the centre line with the offset a distance equal to at least one-half the width of the wheel.

Because of this offset, it is necessary only to reverse the mower direction for performing consecutive perimeter and cross cutting operations on a green in order to have the wheels follow different paths, thus avoiding undue compaction.

USE - Self-propelled, triplex greens mower. @ (5pp) @

Abstract (EP): 9209 EP 324970

Self-propelled lawn mower (10) with two front running wheels (14,16), at least one rear running wheel (18) and at least three mowing mechanisms (32, 34, 36) arranged with reference to the direction of travel in each case in front of a running wheel (14, 16, 18), wherein the running wheels (14, 16, 18) are arranged symmetrically with respect to the longitudinal central axis (a) of the lawn mower (10) and the two mowing mechanisms (32, 34) lying outwardly at the two sides of the lawn mower (10) are transversely spaced from one another, characterised in that one of the mowing mechanisms (32, 34) arranged transversely spaced is arranged asymmetrically relative to the longitudinal central axis (a). @ (7pp) @

Derwent Class: P12;

Int Pat Class: A01D-075/30; A01D-034/44